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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/630,356	08/01/2000	Masayuki Yamada	36409-00100	7717

7590

08/06/2003

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EXAMINER

NOLAN, DANIEL A

ART UNIT

PAPER NUMBER

2654

DATE MAILED: 08/06/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Handwritten initials

# Office Action Summary

Application No.

09/630,356

Applicant(s)

YAMADA, MASAYUKI

Examiner

Daniel A. Nolan

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2,3,5,11,15,17,23 and 49-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,5,11,17,23 and 49 is/are allowed.
- 6) ☒ Claim(s) 3,15,50 and 51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Note that this application has been included in **Art Unit 2654**, and that this AU number should be used in all future correspondence.)

### *Response to Amendment*

2. The amendment filed 15 July 2003 has been applied with the effect that the claims were changed as indicated and examined on the merits.

### *Claim Rejections - 35 USC § 103*

#### **Gasper et al, Swaminathan et al & Holzrichter et al**

3. Claims 3, 15, 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gasper et al (U.S. Patent 5,278,943) in view of Swaminathan et al (U.S. Patent 5,751,903) and further in view of Holzrichter et al (U.S. Patent 5,729,694).
4. Regarding claims 3 and 50, Gasper et al addresses the features in *generating a speech segment dictionary for holding a plurality of speech segments* by teaching the

necessity of supporting different representations and encoding methods (column 6 lines 30-32) along with the well-known processes of *encoding speech and storing in a speech segment dictionary* (column 2 lines 64-68).

- Gasper et al does not mention constructing codebooks, but Swaminathan et al (column 2 lines 60-66) reads on the feature of *a construction step of constructing quantization code books using one or more speech segments*.
- Gasper et al (column 2 lines 64-68) reads on the feature of an encoding step of encoding a speech segment using one of the quantization code books (equivalent to the *look-up table* described in column 3 line 20).
- Gasper et al (claim 13 line 6) reads on the feature of *a storage step of storing the encoded speech segment encoded in said encoding step in the speech segment dictionary* (as, the *voice library file* as previously noted).
- Swaminathan et al does not mention the segments being *stored in a speech database*. Holzrichter et al (column 48 lines 65-68 through column 49 line 5) reads on the feature of *using speech segments stored in a speech database*.

It would have been made obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Swaminathan et al and Holzrichter et al to the device/method of Gasper et al so as to organize the segments into a codebook table form for speed of access.

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5. Regarding claims 15 and 51, Gasper et al (column 1 lines 11-12) reads on the features of the claims for the *speech information processing method of synthesizing speech* with Swaminathan et al as follows:

- The initial features of *using a speech segment dictionary, constructing quantization code books, encoding and storing* are the same as those found in claims 3 and 50, and the basis for rejection is applied correspondingly.
- Gasper et al (column 6 lines 1-4) reads on the feature of providing *decoding means for decoding the encoded speech segment by using the quantization code books constructed by said construction means*.
- Gasper et al does not mention the segments being *stored in a speech database*.  
Holzrichter et al (column 48 lines 65-68 through column 49 line 5) reads on the feature of *using speech segments stored in a speech database*, which would have made it obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Holzrichter et al to the device/method of Gasper et al so as to organize the segments into a codebook table form for speed of access.

***Allowable Subject Matter***

6. Claims 2, 5, 11, 17, 23 and 49 are allowed.

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7. The following is a statement of reasons for the indication of allowable subject matter:

- Regarding claims 2 and 49, while Akamine et al (U.S. Patent 5,671,327) considers distortion against calculated values, the features of *storing the encoded speech segment ... where the encoding distortion produced at a 1<sup>st</sup> encoding step is less than a predetermined value; and a 2<sup>nd</sup> encoding step of encoding the speech segment, in a case where the encoding distortion produced at the 1<sup>st</sup> encoding step is not less than the predetermined value* were neither found to be anticipated nor were they found in obvious combination in the prior art of reference.
- The common feature of claims 5, 11, 17 & 23 is phrased so as to preclude a simple alternative between the methods named in the claim. Consequently, the Examiner is proceeding with the understanding that the claims require:
  - ✓ That the invention has the capability of performing all cited methods, and
  - ✓ That the choice is made to implement one of those available methods is supported at all times by the invention.
- Regarding claims 5, 11, 17 & 23 as understood by the Examiner, where multi-code methods do conventionally support a plurality of encoding schemes, the feature that simultaneously supports the *mu-law scheme, scalar quantization, and linear predictive coding encoding methods* is neither anticipated nor was it found in obvious combination in the prior art of record.

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Daniel A. Nolan at telephone (703) 305-1368 whose normal business hours are Mon, Tue, Thu & Fri, from 7 AM to 5 PM.

If attempts to contact the examiner by telephone are unsuccessful, supervisor Richemond Dorvil can be reached at (703)305-9645.

The fax phone number for Technology Center 2600 is (703)872-9314. Label informal and draft communications as "DRAFT" or "PROPOSED", & designate formal

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communications as "EXPEDITED PROCEDURE". Formal response to this action may be faxed according to the above instructions,


or mailed to:                      Box AF  
   Commissioner of Patents and Trademarks  
   Washington, D.C. 20231

or hand-delivered to:          Crystal Park 2,  
   2121 Crystal Drive, Arlington, VA,  
   Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 Customer Service Office at telephone number (703) 306-0377.

Daniel A. Nolan  
Examiner  
Art Unit 2654

DAN/d  
August 3, 2003

  
Richmond Dorvil  
Primary Examiner